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ABSTRACT

This study examined various trends that exist among the 246 refereed articles published in the "Journal of Experimental Education" between 1990 and 1999. The study's results showed that 39 (16%) of the Journal articles published during this 9-year span focused on literacy. Information was categorized for each article with respect to authors' gender, multiple versus single authorship, study design, use of statistics, age of subjects, number of subjects, and kind of research. There was no significant trend by year for the number of articles published by men, women, or male/female co-authors. There was also no significant trend by year for design of study, statistics used, or number of subjects in the study. However, far more of the single-authored articles were written by men than by women and sole-authored articles virtually disappeared after 1996. The majority of the studies analyzed were correlational or experimental by design. Statistics used were primarily ANOVA, with some use of correlational analyses and MANOVA. Most of the studies focused on elementary school or college students. There were more large-scale studies in the last one-third of the decade than in the first two-thirds and all of the studies were basic, not applied. (Contains 42 references and 5 tables of data.) (Author/RS)

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A Decade of Literacy Research in the

Journal of Experimental Education

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Abstract.

Two hundred forty-six refereed articles were published in *JEE* from 1990-1999. Thirty-nine (16%) focused on literacy. Information was categorized for each article with respect to the authors' gender, multiple versus single authorship, study design, use of statistics, age of subjects, number of subjects, and kind of research. There was no significant trend by year for the number of articles published by men, women, or male/female co-authors. There was also no significant trend by year for design of study, statistics used, or number of subjects in the study. However, far more of the single-authored articles were written by men than by women and sole-authored articles virtually disappeared after 1996. The majority of the studies analyzed were correlational or experimental by design. Statistics used were primarily ANOVA, with some use of correlational analyses and MANOVA. Most of the studies focused on elementary school or college students. There were more large-scale studies in the last one-third of the decade than in the first two-thirds. All of the studies were basic, not applied.

A Decade of Research in the *Journal of Experimental Education*

It is obvious that journals published by the major professional organizations in reading and writing (i.e., International Reading Association, National Council of Teachers of English, National Reading Conference) are not the only sources of information for literacy professionals. Both researchers and K-12 public school personnel rely upon reported research findings to guide future research and practice. Scholars are accustomed to consulting professional organizations' journals because those journals are focused on specific kinds of research. However, refereed journals like *JEE* also publish high-quality work on literacy issues and it is critical that they be included in the knowledge base of researchers and K-12 public school personnel.

Thus, the purpose of this article is to identify research in the *Journal of Experimental Education* from 1990-1999 focused on literacy. In addition to identifying the literacy-related articles, information about the articles is categorized to describe the work published and to determine trends in literacy research, including single versus multiple authors, focus of the study, design, statistics used if any, age of subjects, number of subjects, applied versus basic research, and gender of authors.

Methods and/or Techniques

Three university faculty, each with a Ph.D. with a literacy focus, who are also credentialed public school teachers, read every abstract in *JEE*, 1990-1999. Each separately decided if the article focused on literacy and should be included in the study. They agreed on 97% of the articles after reading the abstracts. The other 3% were included/excluded following their discussion. Collectively, the researchers defined

literacy and applicable abstracts as those dealing with some aspect of reading, writing, and speaking with subjects who were students in kindergarten through graduate school.

Following the work of Nelson and Coorough (1994), the following information was identified and categorized by two of the researchers on each study: 1) gender of authors; 2) multiple versus single authorship; 3) design of study (e.g., experimental, descriptive, correlational, analytical, program evaluation, historical, and qualitative; 4) statistics (e.g., ANOVA model, frequencies and percentages, correlation, nonparametric, multivariate, and no statistics; 5) age of subjects; 6) number of subjects; and 7) type of research (applied versus basic). If the researchers could not obtain the information from the abstracts, the entire article was used. The researchers also categorized information pertaining to the topic(s) of the studies. They agreed on 99% of the categories; the other 1% was decided through discussion.

Data Source

The data source were the abstracts from the articles, 1990-1999. The articles themselves were used when necessary.

Results and/or Conclusions

Two hundred forty-six articles were published in the *Journal of Experimental Education*, 1990-1999. Thirty-nine (16%) of the articles focused on literacy. The number of articles focusing on literacy is presented in Table 1 by year. Two-thirds of the

Insert Table 1 here.

articles were published in the first half of the decade. There is a noticeable decline in the number of articles published on literacy after 1994.

Fourteen (36%) were authored by men, 6 (15%) by women, and 19 (49%) had male and female co-authors. Eleven (28%) of the articles were single-authored and 28 (72%) were co-authored. There was no significant trend by year concerning the number of articles published by men, women, or male-female co-authors. From 1996 on, single-authored articles virtually disappeared. This is depicted in Table 2.

Insert Table 2 here.

There were no changes in predominant approaches to design during the decade, which is depicted in Table 3.

Insert Table 3 here.

Thus, 6 (15%) of the articles were correlational and 33 (85%) were experimental. The majority of the studies used ANOVA (29, 74%), three (8%) used correlation, two (5%) used ANOVA and multiple correlation, and 5 (13%) used MANOVA. All of the articles reported basic, not applied, research.

Insert Table 4 here.

The majority of the studies focused on elementary school-age children (13, 33%) or on college students (16, 41%). One (3%) focused on junior high students, 3 (9%) on high school students, and 6 (15%) were multi-age. Two (5%) of the studies had 0-25 subjects, 6 (15%) had 26-50 subjects, 6 (15%) had 51-75 subjects, 6 (15%) had 76-100 subjects, 7 (18%) had 101-150 subjects, 3 (8%) had 151-200 subjects, 5 13%) had 200 or more subjects, 1 (3%) had more than 500 subjects, 1 (3%) had more than 750 subjects, and 2 (5%) had more than 1000 subjects. See Table 4.

The articles had primarily one focus. If there were multiple foci, articles were categorized for each focus. See Table 5.

Insert Table 5 here.

Three articles focused on assessment, 3 on belief systems, 2 on content area reading, 18 on reading comprehension, 1 on technology, 11 on studying, 1 on phonological awareness, 6 on reading strategies, 2 on vocabulary, 1 on gender-related issues, 2 on special education learners, 8 on writing, 1 on spelling, 2 on background knowledge, 4 on text, 5 on psychological factors, and 1 on self-concept.

Conclusions

As expectations for scholarly publications continue to be demanding, this study provides a venue for obtaining information with ease and accuracy by categorizing information about design, use of statistics, authors, topics, and age and number of subjects. It is especially noteworthy that a wide variety of topics are reported. It is also important to note that the papers are reporting empirical, not conceptual, research. Statistics are used in each article. The research reported is predominantly experimental in design, which is unusual since many literacy journals are reporting more descriptive kinds of studies. ANOVA is the predominant statistical analysis used. There are twice the number of male single-authored articles than female single-authored articles, although the majority of the articles have multiple authors with male/female authors. Single-authored articles virtually disappeared during the last 1/3 of the decade. Half the studies have fewer than 100 subjects. Almost 80% of the articles are focusing on elementary and college students. All of the articles report basic, not applied, research, which is also noteworthy since many journals do include significant numbers of applied studies.

In conclusion, the end of the decade gives us an opportunity to reflect upon our work and the work of our colleagues. *JEE* is an important journal and makes a significant contribution to literacy research. The analysis given here should give researchers interested in literacy topics a general framework to operate within when reviewing work, especially work outside literacy organizations' journals. That *JEE* makes a significant contribution is clear.

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Table 1 Number of Articles by Year

Year	Number of Articles
1990	9
1991	6
1992	3
1993	5
1994	6
1995	2
1996	0
1997	3
1998	1
1990	4

Table 2 **Single vs. Multiple-Authored Articles by Year**

Year	Single Author	Multiple Authors
1990	2	7
1991	2	4
1992	0	3
1993	3	2
1994	2	4
1995	1	1
1996	0	0
1997	0	3
1998	0	1
1999	1	3

Table 3 Design of Study by Year

Year	Design	
	Correlational	Experimental
1990	1	8 (includes 1 with correlation)
1991	1	5 (inlcudes 1 with correlation)
1992	0	3
1993	0	5
1994	2	4
1995	1	1
1996	0	0
1997	0	3
1998	0	1
1999	1	3

Table 4. JEE Literacy Related Articles by Author, Kind of Research, Design and Use of Statistics

Author/Date	Single or Multiple	M, F, M/F	Basic Design or Applied	Age of Subjects	Significant Findings
Andrews, Beal, & Corson, 1990	Multiple	M/F	Basic Experimental	grade 6	Children write longer stories and enjoy sessions more when writing in dialogue. There was no difference in the results for children with different levels of reading skill or academic motivation.
Awaida, & Beech, 1995	Multiple	M/F	Basic Correlational	4-7 years old	The greatest predictors of reading quotients for 5-year-olds' are phonological processing and visual discrimination scores; for 6-year olds' phonological processing, socioeconomic status, and non-word reading scores; for 7-year-olds' previous year's reading quotients and non-word reading scores.
Brodney, Reeves, & Kazelskis, 1999	Multiple	M/F	Basic Experimental	grade 5	Reading paired with prewriting before composing was found to be a more effective pre-writing instructional strategy than pre-writing only, reading only or neither pre-writing nor reading.
Butyniec-Thomas, & Woloshyn, 1997	Multiple	F	Basic Experimental	grade 3	On a spelling dictation test administered 2, 6, and 9 weeks after instruction, students in an explicit strategy plus whole language instructional setting outperformed students receiving only explicit-strategy or only whole language instruction. The two experimental conditions that included explicit-strategy instruction were generally superior to whole language.
Castell 1991	Single	M	Basic Correlational	grade 8	When a single response was changed on a multiple-choice test there was a two-to-one chance that the new response would raise rather than lower the final score. Gains from answer changing on test items were slightly higher for poor readers as a group than were those for good readers.

Chan, 1994	Single	F	Basic Correlational	grades 5, 7, 9	Motivation variables have a more important role than strategic learning in explaining achievement variance in younger grades. Strategic learning was found to mediate between the effects of motivation on reading achievement in Grade 9. Learned helplessness was observed among the poor learners in the study.
Cool, Yarbrough, Patton, Runde, & Keith, 1994	Multiple	M/F	Basic Experimental	grade 6	Students worked on two difficulty levels of individualized mathematics and reading assignments under three distraction conditions: quiet; self-selected, self-regulated radio; and self-selected, self-regulated television. The data yielded no evidence of sizable distracter effects on students' time spent studying, computational accuracy, reading comprehension, or reading rate.
Crano, & Johnson, 1991	Multiple	M	Basic Experimental/ Correlational	adolescent	Children participated in a 6 week remedial reading program; one group received remedial reading instruction and a second group reading instruction plus spatial skill training. Significant differences favoring the spatially trained respondents were observed. Correlational analysis suggested that lower level reading skills influenced later gains in comprehension.
Cunningham, & Gall, 1990	Multiple	M	Basic Experimental	high school	Two groups of secondary school students read a history chapter written in either narrative or expository style. Both groups had similarly positive attitudes toward the text version they read, although in face-to-face comparison the majority of students preferred the narrative version.
Das, & Mishra 1991	Multiple	M	Basic Experimental	grades 5-6	Memory span was found to be a linear function of naming time and speech rate, and all three tests were better performed by good readers than by average readers, who in turn were better than poor readers. Reading was best predicted by naming time. Time and speech rate had a strong link to reading decoding.

Foos, 1995	Single	M	Basic Experimental	college students	Less frequent summarizing while studying a text produces better performance than no summarizing or more frequent summarizing. Total study time did not influence findings. The same effect can be obtained for recognition as well as recall measures.
Friedman, & Ansley, 1990	Multiple	M	Basic Experimental	grades 3-8	Three different sets of listening items accompanied by answer sheets requiring varying amounts of reading were administered. The results indicated that listening scores increased and differed significantly from each other as more printed information was added to the answer sheet.
Garner, & Gillingham 1991	Multiple	M/F	Basic Experimental	college students	Topic knowledge, cognitive interest, and text recall of a group of adult readers were measured. The three variables were highly associated. Readers knowing *nothing* or *everything* about a given topic were more likely to be uninterested than interested in the paragraph; readers knowing *something* were more likely to be interested than uninterested.
Hall, Dansereau, & Skaggs, 1992	Multiple	M	Basic Experimental	college students	Knowledge maps were found to be superior to traditional text in acquisition and affect associated with studying for one type of material. Students in the map groups reported gaining more knowledge about their information process and study strategies.
Hall, Hall, & Saling, 1999	Multiple	M/F	Basic Experimental	college students	Map and structure groups recalled significantly more subordinate propositions than a no-cue group. The groups did not differ significantly with respect to subordinate propositions. The results suggest that postorganization activities that emphasize spatial encoding enhance the effectiveness of knowledge maps, especially with respect to superordinate concepts.

Hall, & Sido-Hall, 1994a	Multiple	M/F	Basic Experimental	college students	Students studied a 1,500 word text passage. Those in a map group recalled more than their traditional text counterparts did for both color-enhanced and back-and-white materials. Those who studied color-enhanced materials recalled significantly more than those who studied black-and-white materials across both map and traditional text groups.
Hall, & Sido-Hall, 1994b	Multiple	M/F	Basic Experimental	college students	Students who studied from knowledge maps recalled significantly more than those who studied traditional text. In addition, a marginally significant color-coding and test-anxiety interaction was found.
Hamilton, 1990	Single	M	Basic Experimental	college students	Author-generated elaborations produced significantly better application of concepts within problem-solving situations than learner-generated elaborations. Specific elaborations produced both a) higher levels of concept definitions and b) classification of novel examples and problem-solving performance than varied elaborations. A significant interaction between type of generation and specificity of elaborations was found for number of teaching examples recalled.
Kiewra, Mayer, Dubois, Christensen, Kim, & Risch, 1997	Multiple	M/F	Basic Experimental	middle school & college students	Advanced organizers that integrated subtopic information (linear and matrix) increased recall of subtopic information. More conventional organizers aided overall recall, especially general topic information.
King, & Rosenshine, 1993	Multiple	M/F	Basic Experimental	grade 5	Children who used highly elaborated question stems outperformed those using less elaborated stems. Findings indicate that in cooperative discussion contexts structured guidance in asking thought-provoking questions elicited explanations that mediate learning

Knudson, 1991	Single	F	Basic Experimental	grades 4,6,8	Children received instruction in writing and then were evaluated through analytic scoring of their efforts with standard writing prompts administered immediately after treatment and again 2 weeks later. Older children wrote better than younger ones; girls wrote better than boys immediately after the study but not 2 weeks later.
Knudson, 1993	Single	F	Basic Experimental	grades 3, 5	There was no significant main effect for students receiving instruction in writing in response to prompts. There was a significant main effect for time.
Kosmoski, Gay, & Vockell, 1990	Multiple	M/F	Basic Correlational	grade 5	A significant positive correlation was found to exist between cultural literacy and academic achievement. The positive relationship existed in all subgroups of ethnicity, socioeconomic status, and type of school attended.
Lambiotte, & Dansereau, 1992	Multiple	M/F	Basic Experimental	college students	Free-recall tests revealed that listeners with low prior knowledge of biology learned the most when knowledge maps accompanied the lecture and the least when key terms were listed. For listeners with high prior knowledge the opposite was true.
Louth, McAllister, & McAllister, 1993	Multiple	M/F	Basic Experimental	college students	There was no statistical difference between students receiving instruction in interactive, collaborative or independent writing. However, attitude measure showed that subjects in the collaborative conditions were significantly more pleased with their writing than were subjects who worked independently.
McMinn, Troyer, Hannum, & Foster, 1991	Multiple	M/F	Basic Experimental	college students	Undergraduates exposed to a 20 minute lecture either on the use of nonsexist language or an unrelated topic showed no change in use of sexist language in short essay responses on a posttest or in a 2 week follow-up. In a second study the procedure was repeated with one group receiving instruction on an interactive computer program. The method of presentation showed no effect but the group receiving training about sexist language used less sexist language on the essay questions.

Meulenbroek, & Van Gallen, 1990	Multiple	M	Basic Experimental	grades 2-6	Spatial ambiguity, allographic variability, contextual ambiguity, and letter frequency are determinants of the time needed by children for perceiving printed and producing corresponding cursive letters. Letter frequency and curvature of grapheme segments determine the motor complexity of cursive graphemes.
Page, 1994	Single	M	Basic Correlational	high school	Samples of high school students essays were analyzed using computer evaluation and simulated groups of human judges. Computer scoring was found to be close to the apparent reliability of targeted human judge groups.
Reynolds, & Hart, 1990	Multiple	F	Basic Experimental	grade 4	The purpose of this study was to determine whether differences exist between cognitive mapping, brainstorming, or outlining when writing stories. Significant differences were found between the mapping group and the other two groups, with the organization of the mapping group stories rated higher than either the brainstorming or outlining groups.
Robinson, Katayame, Dubois, & Devaney, 1998	Multiple	M	Basic Experimental	college students	In 2 experiments delayed review facilitated application performance for students who viewed only text or text plus outlines. Students who delayed their review of graphic organizers were more likely to report using nonmemorization study strategies than those who reviewed immediately.
Shimoda, 1993	Single	M	Basic Experimental	college students	Subjects read two short excerpts each from psychology texts and civil engineering. Familiar topics increased comprehension, reading speed and reported interest and topic familiarity.
Skaalvik, & Valas, 1999	Multiple	M	Basic Correlational	grades 3, 6, 8	Relations among achievement, self-concept, and motivation in mathematics and language arts were examined. Results were consistent with a view that achievement affects subsequent self-concept. There is no evidence that self-concept affects subsequent motivation or achievement.

Spires, Gallini, & Riggsbee, 1992	Multiple	M/F	Basic Experimental	grade 4	A statistically significant pattern on higher performance was shown by a group of students receiving instruction in focusing on previewing statements preceding targeted portions of a text when compared to groups receiving no instruction or instruction in text organizational patterns focusing on problem/solution and comparison/control formats.
Tuckman, 1993	Single	M	Basic Experimental	college students	Students who were required to write and submit coded elaborative outlines for textbook chapters covered on a test scored significantly higher than students who wrote standard outlines, received instruction only, or voluntarily wrote coded elaborative outlines.
Thornton, Bohlmeyer, Dickson, & Kulhavy, 1990	Multiple	M/F	Basic Experimental	college students	College students' spontaneous study tactics are at least as effective as tactics imposed by short-term training.
Troutt-Ervin 1990	Single	F	Basic Experimental	college students	Students studying medical terminology scored significantly higher with a keyword method than with a traditional method in both initial learning and retention of medical definitions for as long as 8 weeks. The keyword methods proved equally effective in both a conventional classroom setting and individualized learning.
Verdi, Johnson, Stock, Kulhavy, & Whitman-Ahern, 1997	Multiple	M/F	Basic Experimental	middle school, college students	In two experiments groups that studied map-like diagrams learned higher scores on various measures of knowledge acquisition, but the difference was not statistically significant.
Webb, Saltz, McCarthy, & Kealt, 1994	Multiple	M/F	Basic Experimental	grade 5	Students studied a map of a fictitious island while twice listening to a related narrative containing target feature and nonfeature items. Students remembered more text features and were more confident of their responses when cued by icons plus labels than by icons only. Students also recalled more map features and their locations on a map reconstruction task.

Yeung 1999	Single	M	Basic Experimental	grades 5, 8, college students	For less experienced readers an integrated format reduced split-attention effects for comprehension but induced redundancy effects for vocabulary learning. For more experienced readers, the integrated format induced redundancy effects and hampered performance in comprehension.

Table 5 Studies by Topic

Assessment
Casteel, 1991
Friedman & Ansley, 1990
Page, 1994

Background Knowledge
Kosmoski, Gay, & Vockel, 1990l
Lambiotte & Dansereau, 1992

Belief Systems
Chan, 1994
Louth, McAllister, & McAllister, 1993
Skaalvik& Valas, 1999

Content Area
Cunningham & Gall, 1990
Lambiotte & Dansereau, 1992

Gender-related Issues
McMinn, Troyer, Hannum, & Foster, 1991

Phonological Awareness
Awaida & Beech, 1995

Psychological Factors
Chan, 1994
Cool, Yarbrough, Patton, Runde, & Keith, 1994
Das & Mishra, 1991
Garner & Gillingham, 1991
Yeung, 1999

Reading Comprehension
Chan, 1994
Cool, Yarbrough, Patton, Runde, & Keith, 1994
Crano & Johnson, 1991
Cunningham & Gall, 1990
Foos. 1995
Garner & Gillingham, 1991
Hall, Dansereau, & Skaggs, 1992
Hall, Hall, & Saling, 1999
Hall & Sidio-Hall, 1994a
Hall & Sidio-Hall, 1994b
Hamilton, 1990

King & Rosenshine, 1993
Shimoda, 1993
Spires, Gallini & Riggsbee, 1992
Tuckman, 1993
Verdi, Johnson, Stock, Kulhavy, & Whitman-Ahern, 1997
Webb, Saltz, McCarthy, & Kealy, 1993
Yeung, 1999

Reading Strategies
Foos, 1995
Hall, Dansereau & Skaggs, 1992
Hamilton, 1990
Kiewra, Mayer, DuBois, Christensen, Kim, & Risch, 1997
Thornton, Bohlmeryer, Dickson, & Kulhavy, 1990
Tuckman1993

Self-concept
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